

Applicants: Eric A. Schon
U.S. Serial No.: 10/086,489
Filed: February 28, 2002
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REMARKS

Claims 90-163 are pending and under examination in the subject application. Applicant has canceled claims 154-161 as being identical to claims 67-74 of related U.S. Patent No. 5,566,337. Applicant has amended claims 90, 115, 118-120 and 162 to address certain formalities. Accordingly, upon entry of this Amendment, claims 90-153, 162 and 163 will be pending and under examination.

In view of the arguments set forth below, applicant maintains that the Examiner's objections and rejections made in the September 27, 2005 Final Office Action have been overcome, and respectfully requests that the Examiner reconsider and withdraw same.

Rejection under 35 U.S.C. §112, First Paragraph

The Examiner rejected claims 90-163 under 35 U.S.C. §112, first paragraph, as allegedly not enabling any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with the claims.

Specifically, the Examiner stated that the specification, while being enabling for methods using closed, circular nucleic acid molecules, nucleic acid molecules with two fixed ends or linear molecules which exceed 800 nucleotides, does not provide enablement for linear molecules shorter than 800 nucleotides. In particular, the Examiner alleges that for smaller, linear molecules, the problem of "slippage" (i.e. where molecules do not remain associated after ligation) is more likely to occur.

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In response to the rejection of claims 154-161, applicant notes that these claims have been canceled herein. Accordingly, the Examiner's rejection is moot.

In response to the rejection of the remaining claims, applicant respectfully traverses for the reasons set forth below.

The test for enablement is whether one skilled in the art could, at the time of the invention, make and use the claimed invention based on the disclosure and information known in the art without undue experimentation. Applicant maintains that the claimed invention satisfies the test for enablement.

The instant methods comprise, in relevant part, a step of determining whether the ends of a probe have ligated to each other. Whether this ligation occurs depends on the presence or absence of a particular "target" nucleic acid residue within a nucleic acid molecule ("target molecule"). Although catenation of the probe and target molecule results from ligating the ends of the probe to each other, there is no requirement that the probe and target molecule *remain* catenated in order to determine whether ligation has occurred. Accordingly, the claims themselves have no such requirement. Rather, known methods such as gel shift assays and electron microscopy can be used to determine whether ligation has occurred where the target molecule is short and linear. Consequently, the claimed methods can be performed even if slippage between the target molecule and ligated probe does occur.

In sum, no pending claim requires the ligated probe to remain catenated to the target molecule for one to practice the claimed method. The question of whether slippage does or does not occur is therefore irrelevant to the issue of enablement.

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In view of the above remarks, applicant respectfully maintains that claims 90-153, 162 and 163 satisfy the requirements of 35 U.S.C. §112, first paragraph.

Double Patenting Rejection

The Examiner rejected claims 90-163 under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims 1-76 of U.S. Patent No. 5,866,337.

In response to the rejection of claims 154-161, applicant notes that these claims have been canceled herein. Accordingly, the Examiner's rejection is moot.

In response to the rejection of the remaining claims, applicant will consider submitting a terminal disclaimer at such time as the instant claims are deemed otherwise allowable.

Summary

Applicants respectively request that a Notice of Allowance be issued for this application.

No fee, other than the \$120.00 extension fee, is deemed necessary in connection with the filing of this Communication. However, if any additional fee is required, authorization is hereby given to charge the amount of such fee to Deposit Account No. 03-3125.

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If a telephone interview would be of assistance in advancing the prosecution of the subject application, applicants' undersigned attorneys invite the Examiner to telephone them at the number provided below.

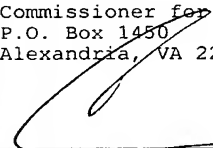
Respectfully submitted,



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1/27/06
Date